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EXAMINER

SCHUBERT, KEVIN R

ART UNIT

PAPER NUMBER

2137

DATE MAILED: 04/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,952

Applicant(s)

DEBIEZ, JACQUES

Examiner

Kevin Schubert

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-13 have been considered.

Claim Rejections - 35 USC § 103

5 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

10 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15 Claims 1-2,4-6, and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nissl, U.S. Patent No. 6,530,023, in view of Hartman, U.S. Patent No. 5,500,897.

 As per claim 1, the applicant describes a trusted high stability time source for use with a digital time stamping service and a trusted external time source comprising the following limitations which are met by Nissl in view of Hartman:

- 20 a) a private time source indicating a private time (Nissl: Col 7, lines 29-40);
- b) a published time source indicating a published time (Nissl: Col 7, lines 29-40; Col 4, lines 56-67);
- c) at least one power supply arranged to power the private time source and the published time source (Nissl: Col 7, lines 34-36);
- 25 d) control logic programmed to perform a time stamping operation by receiving a message, appending the published time to the message to create a timestamp, and digitally signing the timestamp with a private key (Nissl: Col 5, lines 13-18);
- e) the control logic being further programmed to perform a published time source update by sending a request to the trusted external time source for a published time update, receiving a reply from
- 30 the trusted external time source including the published time update, and updating the published time with

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the published time update if an update condition is satisfied, wherein the update condition is based in part on a time difference between the private time and the published time update (Nissl: Col 7, lines 29-40; Hartman: Col 3, lines 2-7);

5 Nissl discloses a time validation system in which a computer utilizes a PC plug-in card to produce accurate timestamps.

Regarding parts a) through c), the PC plug-in card is equipped with an internal clock which is a private time source. The PC plug-in card receives a published time from an external published time source such as an external transmitter like Germany's FPTA which transmits the DCF77 at 77khz in a 2000 km radius. The PC plug-in card stores the last valid published time source received thereby having
10 a published time source indicating a published time. When a timestamping operation is about to take place, the private time source (internal clock) is evaluated against the current published time update from the external time source and the last received published time stored in memory. The at least one power supply is the internal battery which powers the private time source or real time clock in the PC plug-in card. It is inherent that there is also power means supplied to the stored published time source in the PC
15 plug-in card to read the time from memory.

Regarding part e), if the difference between the private time (internal clock) and the published time update from the external source is less than a threshold such as 1 sec/month, the last valid published time is updated with the current valid published time update and stored in memory. Also, a timestamping operation takes place and the time published with the timestamp is updated by the
20 published time update (DCF77). The applicant should note that it is the published time update which is used to timestamp, not the private time of the internal clock (Col 7, lines 40-41).

Nissl does not disclose the idea of sending a request to the external time source for a time update. In Nissl's system, the time is updated automatically. This is because Nissl's system discloses the use of the DCF77 signal, which is constantly transmitted. Hartman discloses the idea that a client can
25 request a time update from a trusted server. It would have been obvious to one of ordinary skill in the art at the time the invention was filed to incorporate the ideas of Hartman with those of Nissl because doing

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so allows a client to receive a time update in a system in which the time updates are not sent automatically.

As per claim 2, the applicant describes the time source of claim 1, which is met by Nissl in view of
5 Hartman (see above), with the following limitation which is met by Nissl:

A printed circuit board including a connector for connecting to a bus of a computer, wherein the private time source, the published time source, the at least one power supply, and the control logic are mounted to the printed circuit board (Nissl: 25 of Fig 6);

The circuit board is the PC Plug-in card. The private time source is the internal real time clock.
10 The published time source is the stored last published time update.

As per claim 4, the applicant describes the time source of claim 1, which is met by Nissl in view of Hartman (see above), with the following limitation which is met by Hartman:

Wherein the control logic is programmed to perform the published time source update at least
15 once per month (Hartman: Col 3, lines 2-7);

As described by Hartman, the time updates can occur at any prescribed regular time interval.

As per claim 5, the applicant describes the time source of claim 1, which is met by Nissl in view of Hartman (see above), with the following limitation which is met by Nissl:

20 Wherein the update condition is not satisfied when the time difference between the private time and the published time update is greater than 6 hours (Col 7, lines 29-40);

The update condition is not satisfied when the difference between the time update from the external source and the private time exceeds a threshold which can be any value, including greater than 6 hours.

25

As per claim 6, the applicant describes the time source of claim 1, which is met by Nissl in view of Hartman (see above), with the following limitation which is met by Nissl:

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Wherein the control logic updates the published time with the published time update in an update manner that is based on a time difference between the published time and the published time update (Nissl: Col 7, lines 29-40);

5 In this example the published time update is the DCF77 and the published time is the internally stored previously published time (tE). The published time update has to be greater than the stored published time in order for the time stamping operation to take place.

As per claims 11 and 12, the applicant describes the time source of claims 1 and 11, which are met by Nissl in view of Hartman (see above), with the following limitation which is met by Nissl:

10 Wherein the control logic is further programmed to compare the private time with the published time to determine a time difference, and to indicate that the trusted high stability time source has expired when the time difference exceeds a predetermined threshold (Nissl: Col 7, lines 29-40).

The threshold can be any value, including 6 hours.

15 As per claim 13, the applicant describes the time source of claim 1, which is met by Nissl in view of Hartman (see above), with the following limitation which is met by Nissl:

A tamperproof enclosure encapsulating the private time source, the published time source, and the control logic (Nissl: Col 11, line 3 to Col 12, line 2).

20 Claims 3 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nissl in view of Hartman in further view of Esker, U.S. Patent No. 6,236,277.

As per claim 3, the applicant describes the time source of claim 1, which is met by Nissl in view of Hartman (see above), with the following limitation which is met by Esker:

25 a) a first crystal oscillator configured to stabilize the private time source (Esker: Col 7, lines 3-11);
b) a second crystal oscillator configured to stabilize the published time source (Esker: Col 7, lines 3-11);

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Nissl in view of Hartman disclose all the limitations of claim 1. However, Nissl in view of Hartman fail to disclose that the private time source, or internal time source, and the published time source, or external time source of the DCF77 signal, have crystal oscillators.

5 Esker discloses a time updating system in which a local clock and a master clock both run off of crystal oscillators. It would have been obvious to one of ordinary skill in the art at the time the invention was filed to combine the ideas of Esker with those of Nissl in view of Hartman because using a crystal oscillator is a common way of maintaining a clock.

10 As per claim 7, the applicant describes the time source of claim 6, which is met by Nissl in view of Hartman (see above), with the following limitation which is met by Esker:

Wherein the update manner is a normal update manner when the time difference between the published time and the published time update is not greater than 5 seconds, otherwise, the update manner is a slow update manner (Esker: Col 2, lines 25-35);

15 Nissl in view of Hartman disclose all the limitations of claim 6. However, Nissl in view of Hartman fail to disclose the use of updating the clock in a slow manner.

Esker discloses the idea of slowly updating a clock of the time difference is great (though Esker does not necessarily disclose 5 seconds). It would have been obvious to one of ordinary skill in the art at the time the invention was filed to combine the ideas of Esker with those of Nissl in view of Hartman and update the clock in a slow manner because doing so assures that a large clock deviation is incrementally corrected in order to prevent huge time disparities.

20

As per claim 8, the applicant describes the time source of claim 7, which is met by Nissl in view of Hartman (see above), with the following limitation which is met by Esker:

25 Wherein the control logic is programmed to perform the published time source update once per day (Esker: Col 2, lines 25-35);

Esker discloses that the correction is applied at regular intervals. The regular intervals could be once per day.

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Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nissl in view of Hartman in further view of Watson, U.S. Patent No. 6,775,704.

5 As per claims 9 and 10, the applicant describes the time source of claims 1 and 9, which are met by Nissl in view of Hartman (see above), with the following limitation which is met by Watson:

Wherein the update condition is further based on an elapsed time between sending the request and receiving the reply (Watson: Col 7, lines 29-32);

10 Nissl in view of Hartman disclose all the limitations of claim 1. However, Nissl in view of Hartman fail to disclose the idea that the update condition is based on an elapsed time between sending the request and receiving the reply.

Watson discloses the idea that a message is sent with a timestamp which is used to make sure that a message was not sent more than 5 to 20 seconds after it is received.

15 It would have been obvious to one of ordinary skill in the art at the time the invention was filed to combine the ideas of Watson with those of Nissl in view of Hartman and incorporate the use of monitoring the elapsed time from when a request was sent to when the reply is received so that reply attacks do not occur.

20 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Schubert whose telephone number is (571) 272-4239. The examiner can normally be reached on M-F 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should
5 you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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